

1. A vacuum cleaner brushroll comprising:

- a) a spindle having first and second ends and a longitudinal axis of rotation,
- b) bristle tufts on said spindle arranged in sections along its length,
- c) said bristle tufts in each section forming rotationally spaced rows, and
- d) Said rows of each of said sections being rotationally spaced from the rows of adjacent sections to form dwell positions around said spindle.

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2. A brushroll as claimed in claim 1 wherein said rows are parallel to said longitudinal axis.

3. A brushroll as claimed in claim 2 wherein said rows of each section are rotationally spaced 180° apart.

4. A brushroll as claimed in claim 2 or claim 3 wherein each row of each section is rotationally spaced 60° from one row in an adjacent section and 120° from another row in said adjacent section.

5. A brushroll as claimed in claim 1 wherein said rows are helically oriented.

6. A brushroll as claimed in claim 5 wherein each of said sections has two rotationally opposed rows of tufts.

7. A brushroll as claimed in claim 5 or claim 6 wherein the helix rotation of each of said rows is 45° or less.
8. A brushroll as claimed in claim 7 wherein the rotational spacing of the rows of tufts of adjacent sections is no less than 90° minus the helix rotation of said rows.
9. A vacuum cleaner brushroll comprising:
 - a) a spindle having first and second ends and a longitudinal axis of rotation,
 - b) bristle tufts on said spindle arranged sections along its length,
 - c) said bristle tufts in each section forming two helically oriented rows,
 - d) each of said rows having a helix rotation of about 45° or less, and
 - e) said rows of each section being rotationally spaced from the rows of adjacent sections to form a plurality of dwell positions around said spindle.
10. A brushroll as claimed in claim 9 wherein there are four sections.
11. A brushroll as claimed in claim 9 or claim 10 wherein said rows of each section are rotationally opposed.
12. A vacuum cleaner brushroll as claimed in claim 9 wherein all of said rows have the same direction of helix rotation, and there are four dwell positions..
13. A vacuum cleaner brushroll as claimed in claim 12 wherein said helix rotation is in a range of from about 15° to 20°.

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14. A vacuum cleaner brushroll as claimed in claim 10 wherein, beginning near said one end of said spindle and continuing to near said second end, the first tufts of the second section are each rotationally spaced about 72° and about 108° from the last tufts in rows of the first section, the last tufts of the rows in the second section and the first tufts of the rows in the third section are rotationally spaced about 90°, and the first tufts of the rows in the fourth section are each rotationally spaced about 72° and about 108° from the last tufts of the rows in the third section, whereby there is a dwell position every 90° of brushroll rotation.
15. A vacuum cleaner brushroll as claimed in claim 9 wherein the rows on one-half of said spindle have the same direction of helix rotation, and the rows on the other half have a reverse direction of helix rotation.
16. A vacuum cleaner brushroll as claimed in claim 15 wherein said helix rotation is in a range of from about 20° to 45°.
17. A vacuum cleaner brushroll as claimed in claim 16 wherein, beginning near said one end of said spindle, the last tufts of the rows in the second section are rotationally spaced about 90° from the first tufts in the rows of the third section.